REMARKS

Claims 1-15 and 23-43 are pending. Claims 1, 23, 41, and 43 are in independent form.

In the action mailed September 5, 2007, claims 13, 14, and 29 were recognized as reciting allowable subject matter. Applicant acknowledges the recognition of allowable subject matter with appreciation. In response thereto, new claims 41-43 have been added. Please note that new claims 41 and 43 recite that a force is applied to the piston. Nevertheless, new claims 41 and 43 are believed to be allowable on the same basis as former claims 13 and 29.

CLAIM 1

Claim 1 was rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent Publication No. 2003/0075925 to Lindfors et al. (hereinafter "Lindfors"), U.S. Patent Publication No. 2003/0072875 to Sandhu (hereinafter "Sandhu"), U.S. Patent Publication No. 2003/0232138 to Tuominen et al. (hereinafter "Tuominen"), and U.S. Patent Publication No. 2001/0042523 to Kesala (hereinafter "Kesala").

As amended, claim 1 relates to a semiconductor processing system that includes a variable volume chamber to provide gas consumed in a semiconductor process, a precursor boat inside the variable volume chamber and configured to hold a liquid or a

solid source of gas consumed in a semiconductor process, a pressure detector to detect a parameter indicative of a pressure of gas inside the variable volume chamber and to produce an output indicative thereof, and a pressure controller in communication with the pressure detector and the variable volume chamber. The variable volume chamber defines a variable interior volume. The pressure controller is to apply a force to the variable volume chamber based on the output of the pressure detector and thereby vary the variable interior volume to regulate the pressure of the gas inside the variable volume chamber.

The rejection claim 1 contends that it would have been obvious for one of ordinary skill to have combined Lindfors, Sandhu, Tuominen, and Kesala and arrive at the recited subject matter. This contention was based on the inherent changes in volume that solid materials undergo with changes in temperature. In particular, the rejection contended that all solid chambers inherently change volume with temperature and hence every chamber constitutes a "variable volume chamber" as recited in claim 1.

As a threshold matter, Applicant would like to point out that claim terms are to be given *some* meaning. *See, e.g., Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 29 (1997). Any interpretation of the term "variable volume" that encompasses every chamber is hence improper. A rejection under 35 U.S.C. § 103(a) on this basis thus cannot be maintained.

Further, claim 1 has been amended to recite that the variable volume chamber defines a variable interior volume. The *pressure controller is to apply a force to the variable volume chamber and thereby vary the variable interior volume to regulate the pressure of the gas inside the variable volume chamber*.

None of Lindfors, Sandhu, Tuominen, and Kesala describe or suggest such an application of force to vary a variable interior volume to regulate the pressure of a gas inside the chamber. Even if one were to take the thermal expansion and contraction of a chamber to inherently provide a "variable interior volume," pressure regulation based on such expansions and contractions would not have been obvious to those of ordinary skill. For example, one of ordinary skill would not find it obvious to use the thermal expansion and contraction of Linfors' stainless steel chamber to regulate the pressure of a gas inside the

chamber, especially given that Linfors must apply varying amounts of heat to the interior of his chamber for other reasons. *See, e.g., Linfors*, para. [0021].

Finally, claim 1 was also rejected on an alternative basis. In particular, the rejection also contended that a change in the volume of source material *held* in a chamber reasonably allows the chamber to be considered a "variable volume chamber."

Applicant respectfully disagrees. Changes in the volume of material held in a chamber do not inherently change the volume of the chamber, especially when considering the stainless steel and other vacuum chambers at hand.

Accordingly, claim 1 is not obvious over Lindfors, Sandhu, Tuominen, and Kesala in any combination. Applicant respectfully requests that the rejections of claim 1 and the claims dependent therefrom be withdrawn.

CLAIM 23

Claim 23 was rejected 35 U.S.C. § 103(a) as obvious over Lindfors, Sandhu, Tuominen, and Kesala.

As amended, claim 23 relates to a chemical reactant delivery system. The chemical reactant delivery system includes a variable volume chamber having an outlet and defining a variable interior volume, a precursor boat inside the variable volume chamber and configured to hold a liquid or a solid source

of the reactant gas, a pressure detector to detect a parameter indicative of a pressure of the reactant gas inside the variable volume chamber and to produce an output indicative thereof, and a pressure controller in communication with the pressure detector and the variable volume chamber.

The outlet of the variable volume chamber is to deliver a reactant gas from an interior region of the variable volume chamber to a reaction chamber. The pressure controller is to apply a force to the variable volume chamber based on the output of the pressure detector and thereby vary the variable interior volume to regulate the pressure of the reactant gas inside the variable volume chamber.

The rejection of claim 23 contends that it would have been obvious for one of ordinary skill to have combined Lindfors, Sandhu, Tuominen, and Kesala based on the inherent volume changes of all containers.

As discussed above, any interpretation of the term "variable volume" that encompasses every chamber is improper. Further, claim 23 has been amended to recite that a pressure controller is to apply a force to the variable volume chamber and thereby vary the variable interior volume to regulate the pressure of the reactant gas inside the variable volume chamber.

As discussed above, the combination of Lindfors, Sandhu, Tuominen, and Kesala would not have made either such a variable volume chamber or pressure controller obvious to those of ordinary skill. Accordingly, claim 23 is not obvious over Lindfors, Sandhu, Tuominen, and Kesala in any combination. Applicant respectfully requests that the rejections of claim 23 and the claims dependent therefrom be withdrawn.

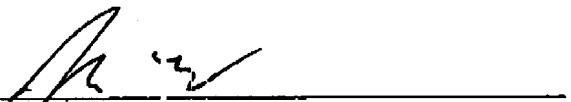
It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Attorney's Docket No.: 10559-858001/P17306
Intel Corporation

Applicant asks that all claims be allowed. Please apply the excess claims fee, along with any other charges or credits, to Deposit Account No. 06-1050.

Respectfully submitted,

Date: December 4, 2007



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